

# Public Health

IN THE COLLEGE OF HEALTH AND HUMAN SERVICES

**OFFICE:** Hardy Tower 119  
**TELEPHONE:** (619) 594-6317 / **FAX:** (619) 594-6112  
**WEBSITE:** <http://publichealth.sdsu.edu>

## Faculty

### Office of the Director

**Hala Madanat**, Ph.D., Professor of Public Health (Health Promotion and Behavioral Science), Director of School

**Susan M. Kiene**, Ph.D., M.P.H., Professor of Public Health (Epidemiology and Biostatistics), Associate Director for Academic Affairs in the School of Public Health

### Epidemiology and Biostatistics

**Stephanie Kay Brodine**, M.D., Professor of Public Health, Emeritus, Division Head

**Richard A. Shaffer**, Ph.D., M.P.H., Professor of Public Health

**Elena S. H. Yu**, Ph.D., M.P.H., Professor of Public Health

**John E. Alcaraz**, Ph.D., Associate Professor of Public Health

**Eyal Oren**, Ph.D., M.S., Associate Professor of Public Health

**Tianying Wu**, M.D., Ph.D., M.S., Associate Professor of Public Health

**Humberto Parada**, Ph.D., M.P.H., Assistant Professor of Public Health

**Caroline Thompson**, Ph.D., M.P.H., Assistant Professor of Public Health

**Mingan Yang**, Ph.D., Assistant Professor of Public Health

**Miguel A. Fraga**, M.D., Adjunct Associate Professor of Public Health

### Health Management and Policy

**Jong-Deuk Baek**, Ph.D., Associate Professor of Public Health, Division Head

**Tracy L. Finlayson**, Ph.D., Professor of Public Health

**Carleen H. Stoskopf**, Sc.D., M.S., Professor of Public Health

**Brandy Lipton**, Ph.D., Assistant Professor of Public Health

**Melody Schiaffino**, Ph.D., M.P.H., Assistant Professor of Public Health

**Nicola Macchione**, M.P.H., M.S., John J. Hanlon Executive Scholar

### Health Promotion and Behavioral Science

**Eric R. Walsh-Buhi**, Ph.D., Professor of Public Health, Division Head

**Guadalupe X. Ayala**, Ph.D., Professor of Public Health

**Elva M. Arredondo**, Ph.D., Professor of Public Health

**Heather L. Corliss**, Ph.D., M.P.H., Professor of Public Health

**John P. Elder**, Ph.D., M.P.H., Albert W. Johnson Distinguished Professor of Public Health, Emeritus

**Melbourne F. Hovell**, Ph.D., M.P.H., Albert W. Johnson Distinguished Professor of Public Health, Emeritus

**Jerel P. Calzo**, Ph.D., Associate Professor of Public Health

**Elizabeth Reed**, Ph.D., Associate Professor of Public Health

**Noe C. Crespo**, Ph.D., Assistant Professor of Public Health

### Environmental Health

**Eunha Hoh**, Ph.D., Professor of Public Health, Division Head

**Richard M. Gersberg**, Ph.D., Professor of Public Health, Emeritus

**Penelope J.E. (Jenny) Quintana**, Ph.D., M.P.H., Professor of Public Health (Graduate Adviser)

**M. Zohir Chowdhury**, Ph.D., Associate Professor of Public Health

**Karilyn Sant**, Ph.D., M.P.H. Assistant Professor of Public Health

### Preventive Medicine Residency

**Linda L. Hill**, M.D., M.P.H., Adjunct Professor of Public Health, Director

**Jill Waalen**, M.D., M.P.H., M.S., Adjunct Associate Professor of Public Health

**Ryan Moran**, M.D., M.P.H., Assistant Clinical Professor, Family Medicine and Public Health, UCSD

**Deepa Sannidhi**, M.D., Assistant Clinical Professor, Family Medicine and Public Health, UCSD

## The John J. Hanlon Chair in Health Services Research and Policy

Alvarado Hospital Medical Center has joined with SDSU's faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the School of Public Health (SPH). The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU's School of Public Health.

## General Information

The School of Public Health offers advanced study leading to the degrees of Doctor of Philosophy, Master of Public Health, Master of Science, and a program that allows students to earn the Master of Public Health concurrently with the Master of Social Work, the Master of Arts in Latin American Studies, or the Doctor of Medicine. The Ph.D. is offered in three concentration areas, to include epidemiology, global health, health behavior with various specialization opportunities (see doctoral program); the M.P.H. is offered with concentrations in the areas of biometry, environmental health, epidemiology, health promotion and behavioral science, and health management and policy; the M.S. degree is offered with a concentration in the area of environmental health sciences. In addition to these advanced degree programs, the school offers a preventive medicine residency program that prepares qualified physicians to sit for the American Board of Preventive Medicine certification examination. Residents may receive the M.P.H. degree along with completion of this residency program. Finally, the public health faculty directs academic study leading to a Bachelor of Science degree in health science for those undergraduate students interested in public health. For more information concerning this undergraduate program, see the General Catalog.

The School of Public Health is nationally accredited by the Council on Education for Public Health (CEPH). The graduate program in health management and policy is accredited by the Commission on Accreditation for Health Management Education (CAHME), and the preventive medicine residency program is accredited by the Accrediting Commission for Graduate Medical Education (ACGME).

The curriculum in the School of Public Health has been designed to prepare students as practitioners of public health as well as for careers in teaching and research and as leaders in both public and private sector agencies and organizations. To accomplish this mission effectively, the faculty of the School of Public Health is augmented by expert practitioners in specialized fields related to public health who contribute to both the academic and practical experiences of students pursuing public health degrees. These professionals, who hold research or adjunct professorships in the school, come from a variety of settings such as the County Health and Human Services Agency, military services, hospitals, HMOs, managed care agencies, industry, and other academic institutions.

The School of Public Health has established close cooperation with the Department of Family and Preventive Medicine in the School of Medicine at the University of California, San Diego. The UCSD medical school faculty has joined the public health faculty at SDSU in offering the Ph.D. in public health as well as the preventive medicine residency program. Under a special affiliation agreement between the two institutions, medical students at UCSD may take public health courses at SDSU while pursuing their medical studies and, if they choose, earn the M.D. and M.P.H. degrees concurrently. Likewise, SDSU students pursuing advanced study in the SPH may enroll for specialized courses in the medical school.

This broad network of individual practitioners and the institutions they serve provides a variety of health facilities in which students at the SPH may meet field studies and practicum requirements. Many of these opportunities are available not only in the

San Diego region, but also in Mexico. The school's proximity to the Mexican border has led to the development of strong professional ties between the faculty and students of the SPH and their counterparts in Baja California. Special arrangements with Universidad Autonoma de Baja California enable students to take courses for credit at the Tijuana campus. This connection has produced a continuing series of jointly sponsored binational research and service projects designed to improve public health conditions and health services on both sides of the border.

## Research

Faculty and student research in the broad interdisciplinary field of public health is conducted within the various specialized areas that are generally defined by the degree concentrations. The following descriptions illustrate the focus of research within each of these areas.

**Biometry and Biostatistics:** Development and application of statistical methods and models in the fields of public health, medicine, and biology. A concentration in biometry, and the scope of the academic and research opportunities in the university may be seen in the listing for the program in biostatistics and biometry presented earlier in this bulletin.

**Environmental Health:** Identification, evaluation and control of chemical, biological and physical agents in the environment. Current emphasis is on U.S.–Mexico border issues and on applying emerging technologies to environmental programs.

**Epidemiology:** Identification of biological, environmental, social, and behavioral risk factors of human disease; determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases.

**Health Promotion and Behavioral Science:** Behavioral science applied to health-related behavior for the identification of risk factors for physical and mental health “illnesses,” and the experimental evaluation of interventions aimed at changing risk practices or promoting health enhancing behavior; emphasis is placed on vulnerable populations, such as low income, minority, women, and children.

**Health Management and Policy:** Management of health care facilities, services, and organizations; planning and evaluation of public and private sector programs; administration and operations in specialty services, hospitals, ambulatory care, insurance companies, HMOs, and other health-related organizations.

## Affiliated Research Centers

In an effort to serve better the community at large, the School of Public Health sponsors the Institute for Public Health. The institute serves as the school's bridge with the community, facilitating field practice opportunities, community-based research and program evaluations, and a venue for continuing education.

In addition, a number of research centers have been established to integrate the specialized research of its faculty and students. These are the Center for Behavioral Epidemiology and Community Health (CBEACH), the Center for Research on Sexuality and Sexual Health (SASH), and the Institute for Behavioral and Community Health (IBACH). For more information on these centers, see Part Three of this bulletin.

## Admission to Master's and Doctoral Study

### Master of Public Health Degree

### Master of Science Degree in Public Health

### Master of Public Health Degree and Master of Arts Degree in Latin American Studies

Students applying for admission should electronically submit the university application available at <http://www.calstate.edu/apply> along with the \$55 application fee as described in Part Two of this bulletin.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Public Health.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

**Graduate Admissions**  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

1. Official transcripts (in sealed envelopes) from all post-secondary institutions attended;

### NOTE:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
  - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
2. GRE scores (<http://www.ets.org> SDSU institution code 4682);
  3. English language score, if medium of instruction was in a language other than English (<http://www.ets.org> SDSU institution code 4682).

## School of Public Health

Applicants seeking admission to the Master of Public Health, Master of Science, or Master of Public Health and Master of Arts degree in Latin American Studies should contact the School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our website at <http://publichealth.sdsu.edu>.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

## Master of Social Work Degree and Master of Public Health Degree

Students applying for admission should electronically submit the university application available at <http://www.calstate.edu/apply> along with the \$55 application fee as described in Part Two of this bulletin.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Social Work.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

**Graduate Admissions**  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

1. Official transcripts (in sealed envelopes) from all post-secondary institutions attended;

### NOTE:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
  - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
2. GRE scores (<http://www.ets.org> SDSU institution code 4682);
  3. English language score, if medium of instruction was in a language other than English (<http://www.ets.org> SDSU institution code 4682).

## School of Social Work

The following materials should be mailed or delivered to:

**School of Social Work**  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4119

1. A narrative statement as described in Instructions for Applicants;
2. Three letters of recommendation.

## Ph.D. Degree in Public Health

Students applying for admission should electronically submit the university application available at <http://www.calstate.edu/apply> along with the \$55 application fee as described in Part Two of this bulletin.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Public Health.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

**Graduate Admissions**  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

1. Official transcripts (in sealed envelopes) from all post-secondary institutions attended;

#### NOTE:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
  - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
2. GRE scores (<http://www.ets.org> SDSU institution code 4682);
  3. English language score, if medium of instruction was in a language other than English (<http://www.ets.org> SDSU institution code 4682).

### School of Public Health

Prospective applicants for the doctoral program in public health should go to <http://ph.ucsd.edu/jdp/admissions/index.html> for information on application procedures and deadlines.

## Section I. Master's Degree Programs

### Master of Public Health Degree

#### Admission to the Degree Curriculum

Applicants seeking admission to public health concentration areas leading to either the Master of Public Health or Master of Science degree should contact the School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from <http://publichealth.sdsu.edu>.

Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariate calculus.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

#### Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) satisfactorily pass a faculty evaluation of the progress that they are making in their graduate course of study; (3) complete the core courses, Public Health 601, 602, 603, 604, 605 (students in health management and policy will substitute Public Health 641 for Public Health 605, and students in health promotion and behavioral science will substitute Public Health 661 and 662 for Public Health 603); have a grade point average of at least 3.0 and no grade less than a B– in each core course completed; and (4) have completed at least 12 semester units of approved public health coursework.

In addition, the student must be recommended for advancement to candidacy by the faculty of the School of Public Health.

## Specific Requirements for the Master of Public Health Degree

(Major Code: 12141) (SIMS Code: 557301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 51 units (59 units for students in Health Management and Policy) including: (1) Public Health 601, 602, 603, 604, and 605 (students in health management and policy will substitute Public Health 641 for Public Health 605 and students in health promotion and behavioral science will substitute Public Health 661 and 662 for Public Health 603); (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a minimum of three and a maximum of 12 units of supervised field placement; and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 797, Research, Public Health 798, Special Study, or Public Health 799A, Thesis, must be included in the program as a capstone experience.

Concentrations in biometry, epidemiology, and health promotion and behavioral science require three units of field placement for the Master of Public Health degree. The concentration in health management and policy and the concentration in environmental health both require six units of field placement.

Up to nine units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

### Concentration in Biometry

(SIMS Code: 557308)

#### Courses required for the concentration:

P H 601	Epidemiology.....	3
P H 602	Biostatistics.....	3
P H 603	Behavioral and Social Science in Public Health.....	3
P H 604	Environmental Determinants of Human Health.....	3
P H 605	Health Services Administration.....	3
P H 623	Epidemiological Methods.....	3
P H 627	Advanced Statistical Methods in Public Health.....	3
P H 628	Applications of Multivariate Statistics in Public Health.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)
STAT 551A	Probability and Mathematical Statistics.....	3
STAT 551B	Probability and Mathematical Statistics.....	3

#### Prescribed electives: Six units selected from the following public health courses:

P H 620	SAS for Biostatistics I.....	3
P H 629	SAS for Biostatistics II.....	3
P H 649	Border and Global Public Health Surveillance.....	3
P H 700A	Seminar in Public Health: Epidemiology.....	3
P H 724	Advanced Methods in Epidemiology.....	3
P H 725	Scientific Writing for Epidemiology.....	3 (Cr/NC)
P H 728	Applied Data Analysis.....	3
P H 823	Case-Control Studies.....	3
P H 824	Cohort Studies.....	3
P H 826	Analysis of Case-Control Studies.....	3
P H 827	Analysis of Cohort Studies.....	3

**Prescribed electives: Six units selected from the following statistics courses:**

STAT 560	Sample Surveys.....	3
STAT 670A-670B	Advanced Mathematical Statistics.....	3-3
STAT 672	Nonparametric Statistics.....	3
STAT 676	Bayesian Statistics.....	3
STAT 677	Design of Experiments.....	3
STAT 678	Survival Analysis.....	3
STAT 680A-680B	Advanced Biostatistical Methods.....	3-3

**Electives: Three units selected with approval of concentration faculty from any public health or statistics course.**

**Concentration in Environmental Health  
(SIMS Code: 557315)**

**(Registered Environmental Health Specialist Option V Accredited)**

**Courses required for the concentration:**

P H 601	Epidemiology.....	3
P H 602	Biostatistics.....	3
P H 603	Behavioral and Social Science in Public Health.....	3
P H 604	Environmental Determinants of Human Health.....	3
P H 605	Health Services Administration.....	3
P H 632	Air Quality.....	3
P H 634	Environmental Protection.....	3
P H 636	Hazardous Waste Management.....	3
P H 638A	Principles of Toxicology.....	3
P H 639	Water Quality Investigation.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)
P H 750D	Advanced Field Practice: Environmental Health.....	3 (Cr/NC)
P H 797	Research.....	3 (Cr/NC/RP)

**Prescribed electives: A minimum of nine additional units selected with the approval of the adviser from:**

P H 630	Environmental Health Risk Assessment.....	3
P H 700D	Seminar in Public Health: Environmental Health.....	3-6
P H 784	Global Environmental Health.....	3
P H 798	Special Study.....	1-6 (Cr/NC/RP)

**Concentration in Epidemiology  
(SIMS Code: 557329)**

**Courses required for the concentration:**

P H 601	Epidemiology.....	3
P H 602	Biostatistics.....	3
P H 603	Behavioral and Social Science in Public Health.....	3
P H 604	Environmental Determinants of Human Health.....	3
P H 605	Health Services Administration.....	3
P H 620	SAS for Biostatistics I.....	3
P H 621	Epidemiology of Infectious Diseases.....	3
P H 622	Epidemiology of Chronic Diseases.....	3
P H 623	Epidemiological Methods.....	3
P H 627	Advanced Statistical Methods in Public Health.....	3
P H 629	SAS for Biostatistics II.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)

**Prescribed electives: A minimum of six units selected from the following public health courses in epidemiology:**

P H 625	Control of Infectious Diseases.....	3
P H 626	International Health Epidemiology Practicum.....	3
P H 628	Applications of Multivariate Statistics in Public Health.....	3
P H 649	Border and Global Public Health Surveillance.....	3
P H 700A	Seminar in Public Health: Epidemiology.....	3

P H 724	Advanced Methods in Epidemiology.....	3
P H 725	Scientific Writing for Epidemiology.....	3 (Cr/NC)
P H 726	HIV/AIDS Epidemiology and Public Health.....	3
P H 728	Applied Data Analysis.....	3
P H 823	Case-Control Studies.....	3
P H 824	Cohort Studies.....	3

**Electives: Up to six units selected with approval of concentration faculty. These electives may include any public health course or selections from the following:**

Biology 585	
Nutrition 600, 607, 700	
Statistics 550, 551A, 560, 610, 672, 677	

**Concentration in Health Management and Policy  
(SIMS Code: 557415)**

**Graduate Program in Health Management and Policy (CAHME Accredited)**

**Courses required for the concentration:**

P H 601	Epidemiology.....	3
P H 602	Biostatistics.....	3
P H 603	Behavioral and Social Science in Public Health.....	3
P H 604	Environmental Determinants of Human Health.....	3
P H 641	Introduction to Health Services.....	3
P H 642	Health Insurance and Financing Systems.....	3
P H 644A	Health Services Organization Management.....	3
P H 644B	Managing High Performing Health Care Organization.....	3
P H 645	Health Economics.....	3
P H 646	Health Services Research Methods.....	2
P H 647	Quantitative Methods and Health Data Analysis.....	3
P H 648	Health Policy.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)
P H 742A	Health Services Financial Management.....	3
P H 747	Quality Improvement and Program Evaluation.....	3
P H 748	Health Services Competitive Strategy and Marketing.....	3
P H 750E	Advanced Field Practice: Health Management and Policy.....	3 (Cr/NC)
P H 797	Research.....	1 (Cr/NC/RP)
P H 798	Special Study.....	2 (Cr/NC/RP)
P H 797	Research.....	3 (Cr/NC/RP)

**OR**

P H 799A	Thesis.....	3 (Cr/NC/RP)
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**Prescribed electives: Three units selected with approval of adviser. In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.**

P H 700E	Seminar in Public Health: Health Management and Policy.....	3
P H 743	Hospital and Ambulatory Health Systems Management.....	3

**Concentration in Health Promotion and Behavioral Science  
(SIMS Code: 557344)**

**(SIMS Code: 557345 - College of Extended Studies)**

**Courses required for the concentration:**

P H 601	Epidemiology.....	3
P H 602	Biostatistics.....	3
P H 604	Environmental Determinants of Human Health.....	3
P H 605	Health Services Administration.....	3
P H 607	Research Methods.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)

## Public Health

P H 661	Theoretical Foundations of Health Promotion.....	3
P H 662	Motivating Health Behavior .....	3
P H 663	Health Promotion Communications Theory and Design .....	3
P H 666	Health Promotion Program Planning and Assessment.....	3

**Prescribed electives: A minimum of six units selected from the following public health courses:**

P H 664	Health, Society and Human Behavior .....	3
P H 667	Prevention and Control of Chronic Diseases .....	3
P H 668	Seminar in Health Promotion Research .....	3
P H 700F	Seminar in Public Health: Health Promotion and Behavioral Science .....	3
P H 762	Behavioral Medicine.....	3
P H 797	Research.....	3 (Cr/NC/RP)

**Electives: Up to 12 units selected with approval of concentration faculty from any graduate level public health course.**

## Master of Science Degree in Public Health

### Admission to the Degree Curriculum

The M.S. degree in Public Health is offered with a concentration in environmental health sciences.

To be considered for admission to this program, a student must have successfully completed an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The School of Public Health should be consulted for specific course preparation recommended for the Master of Science program. In some cases, if an applicant is deficient in certain basic or applied science areas, some remedial coursework can be completed as an unclassified graduate student. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree. Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the admissions committee and the graduate adviser. Students so admitted will be advised as to remedial steps to take to satisfy the requirement to achieve classified graduate standing.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. Students completing the Master of Science degree with a concentration in environmental health sciences must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program to include at least two courses chosen from the list of courses required with a minimum grade point average of 3.0 (B) and no grade less than a B-; (2) have a thesis proposal which has received the approval of the School of Public Health faculty.

### General Requirements for the Master of Science Degree (Major Code: 12141) (SIMS Code: 557302)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 36 units as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser.

Environmental Health Sciences	Units
Required	15
Prescribed electives	12
PH 650R Field Practice*	—
P H 797 (Research)	6
P H 799A (Thesis)	3
<b>Total Units.....</b>	<b>36</b>

\*A 3-unit field practice may be taken as an elective by students with approval of the academic adviser.

## Specific Requirements for Master of Science Degree Programs

### Concentration in Environmental Health Sciences (Major Code: 12141) (SIMS Code: 557394)

**Courses required for the concentration: 15 units (Not including six units of P H 797 and three units of P H 799A):**

P H 601	Epidemiology.....	3
P H 602	Biostatistics .....	3
P H 604	Environmental Determinants of Human Health .....	3
P H 638A	Principles of Toxicology .....	3
P H 639	Water Quality Investigation.....	3

**Prescribed electives: A minimum of 12 units of coursework selected from the following list with the approval of the faculty adviser.**

P H 603	Behavioral and Social Science in Public Health.....	3
P H 605	Health Services Administration.....	3
P H 627	Advanced Statistical Methods in Public Health.....	3
P H 630	Environmental Health Risk Assessment .....	3
P H 632	Air Quality.....	3
P H 634	Environmental Protection .....	3
P H 636	Hazardous Waste Management.....	3
P H 650R	Field Practice: Required Community Practice.....	3 (Cr/NC)
P H 700D	Seminar in Public Health: Environmental Health .....	3
P H 784	Global Environmental Health .....	3
P H 798	Special Study.....	1-3 (Cr/NC/RP)

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

## Master of Public Health Degree and Master of Arts Degree in Latin American Studies

### General Information

The School of Public Health (SPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and Behavioral Science and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

### Admission to the Degree Curriculum

To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the SPH website at <http://publichealth.sdsu.edu> or the Center for Latin American Studies website at <http://latinamericanstudies.sdsu.edu>.

### Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both SPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (5) complete with a grade of B (3.0) or better, Spanish 302 or Portuguese 401, or three units of 500-level or graduate coursework in Spanish, or

pass the American Council on the Teaching of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above; (6) have been recommended for advancement by the combined faculty advisory committee; (7) have an approved concurrent program of study; and (8) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee.

## Specific Requirements for the M.P.H./M.A. Degree

(Major Code: 49062) (SIMS Code: 997310)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 63 units as listed below.

General Requirements					
Total General Units = 39					
Core Courses (18 units)	Prescribed Electives (15 units from at least two departments)				Culminating Experience (6 units)
LATAM 600 (3) LATAM 601 (3) P H 601 (3) P H 602 (3) P H 604 (3) P H 605 (3)	LATAM 550 (3) LATAM 580 (3)* LATAM 696 (3)* LATAM 750 (3) LATAM 795 (3) LATAM 798 (3) ANTH 508 (3) ANTH 520 (3) ANTH 529 (3) ANTH 531 (3) ANTH 533 (3)* ANTH 582 (3)*	ANTH 583 (3)* ANTH 603 (3) ANTH 605 (3) GEOG 506 (3)* GEOG 573 (3)* GEOG 574 (3)* HIST 550 (3) HIST 551 (3) HIST 558 (3) HIST 580 (3)* HIST 640 (3)* POL S 555 (3)	POL S 562 (3) POL S 564 (3) POL S 565 (3) POL S 566 (3) POL S 568 (3) POL S 655 (3) POL S 661 (3)* POL S 667 (3) POL S 696 (3) PORT 535 (3) SOC 522 (3)*	SOC 554 (3) SOC 730 (3)* SPAN 602 (3) SPAN 606 (3) SPAN 751 (3)* SPAN 752 (3) SPAN 760 (3) WMNST 512 (3) WMNST 565 (3) WMNST 580 (3) WMNST 605 (3)	P H 797 or LATAM 797 (3) P H 799A or LATAM 799A (3)

Public Health Concentration Requirements		
Total Units = 24		
(Students must complete one of the following concentrations)		
<b>Epidemiology Concentration</b> (SIMS Code: 997311) Total Epidemiology Units = 24 Required Courses (15 units) P H 603 (3) P H 621 (3) P H 622 (3) P H 623 (3) P H 627 (3) Prescribed Electives (6 units) P H 625 (3) P H 724 (3) P H 626 (3) P H 726 (3) P H 628 (3) P H 823 (3) P H 649 (3) P H 824 (3) P H 700A (3) Electives (3 units) BIOL 585, NUTR 600, 607, 700, STAT 550, 551A, 560, 672, 677, or three units of electives to be selected with approval of the faculty advisory committee.	<b>Health Promotion and Behavioral Science Concentration</b> (SIMS Code: 997314) Total Health Promotion and Behavioral Science Units = 24 Required Courses (15 units) P H 607 (3) P H 661 (3) P H 662 (3) P H 663 (3) P H 666 (3) Prescribed Electives (6 units) P H 664 (3) P H 667 (3) P H 668 (3) P H 700F (3) P H 762 (3) Electives (3 units) Three units to be selected with the approval of the faculty advisory committee.	<b>Environmental Health Concentration</b> (SIMS Code: 997313) Total Environmental Health Units = 24 Required Courses (21 units) P H 603 (3) P H 632 (3) P H 634 (3) P H 636 (3) P H 638A (3) P H 639 (3) P H 650R (3) Cr/NC Prescribed Electives (at least 3 units) P H 630 (3) P H 700D (3) P H 784 (3) P H 798 (1-6) Cr/NC/RP

\*Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling.

## Master of Social Work Degree and Master of Public Health Degree

### General Information

The School of Public Health and the School of Social Work offer a three year concurrent graduate program leading to a Master of Public Health and a Master of Social Work. The major objective of the concurrent program is to offer preparation in the fields of public health and social work for the purpose of providing the knowledge and skills necessary to promote health, prevent disease, and enhance the delivery of social and health services in the community.

### Admission to the Degree Curriculum

Applicants should refer to the admission to master's and doctoral study section for application instructions. In order to be considered for the concurrent MSW/MPH program, applicants must meet the general requirements for admission to graduate study at the university (see Part Four of this bulletin).

Applicants must have a minimum 2.85 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science. Applicants must have a satisfactory score on the GRE General Test. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE (see Part Four of this bulletin).

A committee composed of faculty from Public Health and Social Work will make all admission recommendations to the dean of the Division of Graduate Affairs.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. All core courses in public health and social work must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Public Health 797 (Research), Social Work 797 (Research), and Public Health 799A (Thesis) or Social Work 799A (Thesis). A thesis incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MSW and MPH degrees.

### Specific Requirements for the M.S.W./M.P.H. Degree

(Major Code: 12991) (SIMS Code: 998210)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 93 units.

#### Social Work/Public Health - Health Management and Policy (SIMS Code: 998221)

SWORK 601	Seminar in Social Welfare Policy and Services .....	3
SWORK 619	Human Behavior in the Social Environment....	3
SWORK 620A	Seminar in Human Behavior and Social Environment: Direct Practice.....	3
SWORK 630	Social Work Practice: A Generalist Perspective .....	3
SWORK 631	Social Work Practice: Individuals, Families, and Groups.....	3
SWORK 632	Social Work and Gerontology: Organizations and Communities.....	3
SWORK 650*	Field Practicum .....	7 (Cr/NC)

SWORK 690/		
GERO 690	Seminar in Research Methods for Social Work and Gerontology.....	3
SWORK 720	Seminar in Selected Topics in Human Behavior and Social Environment.....	3
SWORK 740/		
GERO 740	Advanced Seminar in Administration and Community Development in Social Work and Gerontology.....	3
SWORK 755*	Advanced Field Practicum: Social Work Administration and Community Development.....	8 (Cr/NC/RP)
SWORK 797	Research.....	3 (Cr/NC/RP)
P H 601	Epidemiology.....	3
P H 602	Biostatistics .....	3
P H 604	Environmental Determinants of Human Health .....	3
P H 641	Introduction to Health Services.....	3
P H 642	Health Insurance and Financing Systems.....	3
P H 644A	Health Services Organization Management .....	3
P H 644B	Managing High Performing Health Care Organization .....	3
P H 645	Health Economics .....	3
P H 647	Quantitative Methods and Health Data Analysis.....	3
P H 648	Health Policy.....	3
P H 742A	Health Services Financial Management .....	3
P H 747	Quality Improvement and Program Evaluation .....	3
P H 748	Health Services Competitive Strategy and Marketing .....	3
P H 797	Research.....	3 (Cr/NC/RP)
P H 799A or	Thesis.....	3 (Cr/NC/RP)
SWORK 799A	Thesis.....	3 (Cr/NC/RP)
Electives: Three units of social work electives - recommended:		
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration.....	3

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

If a student, after entering the concurrent MSW/MPH program returns to a single degree program, all of the requirements for the single degree program must then be met.

\*Social Work 650 and 755 must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.

## Section II. Doctoral Program

**WEBSITE:** <http://publichealth.sdsu.edu>

A Ph.D. is offered in three concentration areas, epidemiology, global health, and health behavior.

### Ph.D. in Public Health with a Concentration in Epidemiology

(Major Code: 12141) (SIMS Code: 557329)

A Ph.D. in public health with a concentration in epidemiology is offered by the joint faculties of the Division of Epidemiology and Biostatistics, School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and analytic processes of epidemiology for application to a multitude of disciplines. Specializations are offered through both campuses, including infectious and chronic diseases, global health, exercise science, medical geography, and behavioral epidemiology. Graduates of this program are competitive for a variety of research, teaching, and community service

positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutes.

### Ph.D. in Public Health with a Concentration in Global Health

(Major Code: 12141) (SIMS Code: 557411)

A Ph.D. in public health with a concentration in global health is offered by the joint faculties of the School of Public Health at San Diego State University (SDSU), and the School of Medicine at the University of California, San Diego (UCSD). Global health relates to health issues and concerns that transcend national borders, class, race, ethnicity, and culture. Studies in global health stress the commonality of health issues for the United States and international partners, and involve collective, science-based interventions to resolve these issues. Knowledge about how national governments, multi-national organizations, non-governmental organizations, and the private sector must work together is essential to the success of global health programs. Emphasis is on preparing graduates with the fundamental scientific knowledge, ethical understanding, and specific skills to become public health researchers and professional leaders in multiple settings. Proximity to the U.S./Mexico border and the expertise of many current faculty members at both SDSU and UCSD support and encourage a focus on transborder problems including infectious diseases (e.g., HIV, TB, STDs), non-communicable diseases (diabetes, CVD), and migrant health. Students may develop other areas of specialization such as environmental health, health policy, geographic information systems, and maternal/child health. Required and elective courses include global health practice and theory, program planning and evaluation, emerging infectious diseases, advanced epidemiology and biostatistics, research methods, environmental health, and global maternal/child health. In addition to didactic classes at both partner institutions, students will be expected to complete an international field practicum involving research, policy work, or cultural training. Graduates of the program are competitive for a variety of research, teaching and service positions in academic institutions, governmental and non-governmental organizations, and businesses with global health interests both within and outside of the United States.

### Ph.D. in Public Health with a Concentration in Health Behavior

(Major Code: 12143) (SIMS Code: 557321)

A Ph.D. in public health with a concentration in health behavior is offered by the joint faculties of the Division of Health Promotion and Behavioral Science, School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and analytic processes of health behavioral sciences. Graduates of the program are expected to establish advanced skills in behavior change theory and practice; to establish expertise in advance qualitative and quantitative research methods; to establish advanced skills in the application of interventions and research methods to health behavior in disenfranchised populations; and to establish skills necessary to understand and change health policy. Graduates of the program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutions.

#### Admission to the Degree Curriculum

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multi-disciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative, behavioral, and biological sciences. A master's degree in an area related to the concentration is preferred. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student

into the joint program by each of the units will be conditioned by their respective standards for graduate admissions and also the available facilities.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the deans of the two Divisions of Graduate Affairs; (b) a GPA of at least 3.0 in the last 60 semester (90 quarter) units attempted; (c) good standing at the last institution attended; and (d) an acceptable score (verbal and quantitative) on the GRE General Test. Preference will be given to students with an M.P.H. or M.S. degree in behavioral science or epidemiology.

#### Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of San Diego State University and University of California, San Diego.

#### Advisory Committee

Upon admission to the program, the steering committee of the two institutions will establish an advisory committee for the student. This committee will consist of three faculty members chosen jointly from the two institutions. In consultation with the student, the committee will develop the student's course of study, prepare and guide a preliminary examination, and establish the student's joint qualifying committee. At least one member of the advisory committee must be from SDSU and one from UCSD.

#### Course Requirements

Core courses in behavioral science, epidemiology, and biostatistics are offered at both SDSU and UCSD. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern principles of public health as well as knowledge and application of epidemiology, behavioral science, and biostatistical methods. Elective coursework may be selected from offerings at both campuses.

#### Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Epidemiology

**Epidemiology:** Public Health 623, 724, 800 (Doctoral Seminar in Epidemiology), 823, 824; and six-unit UCSD course series in applied epidemiology (FPM 258A, 258B, 258C, 259A, 259B, 259C).

**Biostatistics:** Public Health 628 and six units in advanced biostatistics.

**Electives:** 24 units in specialty area.

**Graduate Assistantship in Epidemiology:** 6 units

**Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree in epidemiology are required to take the following additional courses: Public Health 601, 602, 621, 622, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

#### Preliminary Examinations

The preliminary examinations will test knowledge and the application of epidemiology and biostatistical methods.

#### Course Requirements for Students with an Existing M.P.H. Degree

**Global Health:** Public Health 628, 649, 700A, 780, 781, 800, 880, and the following courses offered at UCSD (nine units): FPM 258A, 258B, 258C, (FPM 270-Cultural Perceptions about Health and Disease TBD Mixed Methods Research, FPM 287-Emerging/Re-Emerging Global Infectious Diseases; others with consent of instructor; Practicum/Independent Study).

**Electives:** Six or more units in specialty areas to include Public Health 784 and courses selected from other departments with the approval of the adviser.

**International Practicum:** Field Experience: 3-12 units

## Public Health

### **Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree in Public Health are required to take the following additional courses: Public Health 601, 602, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

### **Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Behavioral Science**

**Health Behavioral Science:** Public Health 800 (Doctoral Seminar in Health Behavior), 800 (Professional Seminar in Public Health), 861, 862, 864, 867; and a series of health behavior and epidemiology courses at UCSD (36 units).

**Biostatistics:** Public Health 627 and 798 (SAS or SPSS) for both semesters.

**Electives:** 3 units

**Graduate Assistantship:** 6 units

**Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree are required to take one epidemiology course. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

### **Doctoral Committee**

A five-member committee, composed of faculty at SDSU and UCSD, will be recommended by the advisory committee for each student and approved by the graduate deans from both campuses. One member must be non-program faculty and there must be at least one tenured faculty member from each university. The student's dissertation adviser will chair the committee. At least two members must be from SDSU and two from UCSD.

The doctoral committee will conduct a written and oral comprehensive qualifying examination, which will evaluate the student's understanding and knowledge of his or her special area of behavioral science, epidemiologic interest, or global health. The purpose of this examination is for the student to demonstrate competence in the major research field.

The doctoral committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the Division of Graduate Affairs at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student will be notified of advancement to candidacy by the UCSD Division of Graduate Affairs.

### **Faculty**

Faculty members of the cooperating institutions participate in the joint doctoral program in Public Health Epidemiology and are available for direction of research and as members of joint doctoral committees.

### **Dissertation**

Following successful completion of the qualifying examination and advancement to candidacy, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student's advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

### **Award of the Degree**

The Doctor of Philosophy degree will be awarded jointly by the Trustees of The California State University and the Regents of the University of California in the names of both institutions.

### **Financial Support**

The School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

### **Medical Students Interested in Obtaining the Master of Public Health (M.P.H.) Degree**

San Diego State University, School of Public Health, and University of California, San Diego, School of Medicine, offer a collaborative education effort to enable UCSD medical students to also obtain the M.P.H. degree. The program is designed for those UCSD medical students who anticipate careers in one or more of the following fields: public health, preventive medicine, maternal and child health, epidemiology, environmental health, health promotion and behavioral science, health management and policy, or aerospace medicine, and to those with special interest in such areas as nutrition, demography, international health, and behavioral medicine. In addition, it provides public health training for those planning careers in family practice, pediatrics, general internal medicine, and other aspects of primary care who wish to enhance their knowledge and skills in clinical preventive medicine and in the managerial aspects of health care. The M.P.H. degree or an equivalent academic experience is required for certification by the American Board of Preventive Medicine.

With approval, certain UCSD courses can be counted toward fulfilling the M.P.H. degree requirement at the SDSU School of Public Health.

Further information about these programs can be obtained from the Dean of Students, Maria Savoia, M.D., 858-534-3703.

## Section III. Certificate Programs

### **Preventive Medicine Residency Certificate**

(SIMS Code: 555501)

The purpose of the Preventive Medicine Residency Certificate is to train physicians to assure that they have adequate knowledge, attitudes, and skills germane to general preventive medicine and occupational medicine. The physician will be eligible to sit for the board certification examination administered by the American Board of Preventive Medicine.

In addition to satisfying the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the preventive medicine residency must (1) fulfill the admission requirements given above, and (2) have completed a Doctor of Medicine degree from an accredited institution.

The student will be expected to complete a three year course of study which involves the completion of a clinical year provided by the University of California, San Diego, School of Medicine, the completion of an academic year leading to the Master of Public Health degree provided by the School of Public Health at San Diego State University, and appropriate practicum experiences under the supervision of faculty of one of the two cooperating institutions.

The student is expected to complete the number of units required for the Master of Public Health degree as well as those additional units which may be prescribed in order to complete the practicum year, i.e., Public Health 750.

The student is expected to have maintained a 3.0 average overall in the coursework at the School of Public Health and at the University of California, San Diego, School of Medicine.

**Preventive Medicine Residency Faculty:** Hill, Moran, Sannidhi, Waalen

### **Public Health Certificate**

(SIMS Code: 557389)

The Advanced Certificate in Public Health offers individuals the opportunity to understand core public health principles, prepare for responsibilities or promotion in a public health setting, or offers an opportunity to determine if the Master of Public Health degree program is of interest to pursue. The advanced certificate also provides additional formal education in the public health field. Students who successfully complete the advanced certificate program can apply all 15 units to the Master of Public Health degree if admitted into the degree program in the School of Public Health.

**Admission Requirements**

Applicants must have earned a bachelor's degree in biology, chemistry, health science, nursing, social work, or another health-related degree. A degree in a discipline not specifically mentioned must be approved by the Director of the School of Public Health. Applications may be submitted prior to entering the advanced certificate program or before the completion of nine semester units of coursework that is applicable to the advanced certificate in public health.

Contact the School of Public Health admissions coordinator for further information.

**Course Requirements (15 units)**

Students must complete the following courses with a grade of C (2.0) or better and a GPA of 3.0 or better.

P H 601	Epidemiology.....	3
P H 602	Biostatistics .....	3
P H 603	Behavioral and Social Science in Public Health.....	3
P H 604	Environmental Determinants of Human Health .....	3
P H 605	Health Services Administration.....	3

**Courses Acceptable for Master's and Doctoral Degree Programs (P H)**

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**UPPER DIVISION COURSE****P H 550. Applied International Public Health (3)**

Prerequisite: Public Health 101 or graduate standing.

Global cultural, economic, health, political, and social challenges of different countries. Application of public health concepts in a particular country.

**GRADUATE COURSES****P H 601. Epidemiology (3)**

Prerequisite: Consent of instructor.

Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic, and experimental epidemiology.

**P H 602. Biostatistics (3)**

Prerequisite: Consent of instructor.

Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

**P H 603. Behavioral and Social Science in Public Health (3)**

Prerequisites: Psychology 316, 340, and Sociology 436.

Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

**P H 604. Environmental Determinants of Human Health (3)**

Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.

**P H 605. Health Services Administration (3)**

Overview of health services administration and delivery in U.S. Characteristics of utilization of health care, financing and system structure, types of providers, nonfinancial resources, and assessment and regulation.

**P H 607. Research Methods (3)**

Two lectures and three hours of laboratory.

Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.

Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

**P H 620. SAS for Biostatistics I (3)**

Prerequisite: Credit or concurrent registration in Public Health 602.

Programming in SAS. Analysis, processing, and reading of biomedical data.

**P H 621. Epidemiology of Infectious Diseases (3)**

Prerequisite: Public Health 601.

Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

**P H 622. Epidemiology of Chronic Diseases (3)**

Prerequisite: Public Health 601.

Epidemiology of selected chronic diseases.

**P H 623. Epidemiological Methods (3)**

Prerequisites: Public Health 602, 621 or 622.

Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

**P H 624A. Emergency Preparedness and Response I (3)**

Prerequisite: Classified graduate standing.

Dynamics of natural and man-made disaster management to include planning, organization, management of relief services, and emergency service organizations. Prevention, mitigation, and response to emergency situations, both nationally and internationally.

**P H 625. Control of Infectious Diseases (3)**

Prerequisite: Public Health 621.

Theoretical and practical experience in techniques available for control of infectious diseases.

**P H 626. International Health Epidemiology Practicum (3)**

One lecture and two hours of activity.

Prerequisites: Public Health 601 and 602.

Integrated public health experience with US and Mexican graduate student and faculty teams, culminating with four days in Mexico. International public health projects in underserved indigenous populations.

**P H 627. Advanced Statistical Methods in Public Health (3)**

Prerequisite: Public Health 602.

Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.

**P H 628. Applications of Multivariate Statistics in Public Health (3)**

Prerequisite: Public Health 627.

Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

**P H 629. SAS for Biostatistics II (3)**

Prerequisites: Public Health 620 and credit or concurrent registration in Public Health 602.

Advanced programming in SAS. Higher-level analyses, processing, and readings of biomedical data. (Formerly numbered Public Health 700A.)

**P H 630. Environmental Health Risk Assessment (3)**

Four major steps of risk assessment to include hazard identification, dose-response assessment, exposure assessment, and risk characterization. Will also include risk communication and risk management in environmental arena.

**P H 632. Air Quality (3)**

Properties of airborne gases, vapors, and particulate matter. Effects of air pollution on community. Mobile and stationary sources of air pollution. Meteorology and dispersion of air pollutants. Ambient air quality standards.

**P H 634. Environmental Protection (3)**

Rationale and mechanisms for control of environmental hazards in areas of food protection and vector control, solid waste, and community issues.

## Public Health

### **PH 635. Environmental and Disaster Medicine (3)**

Etiology, diagnosis of disease, and stress in the modern global environment. Detection and control of intentional biological, chemical disasters, and nuclear threats.

### **PH 636. Hazardous Waste Management (3)**

Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.

### **PH 638A. Principles of Toxicology (3)**

Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

### **PH 639. Water Quality Investigation (3)**

Two lectures and three hours of laboratory. Human health problems associated with water usage and with various aquatic environments.

### **PH 641. Introduction to Health Services (3)**

Health care systems in the U.S. Underlying needs, insurance and uninsurance, public programs, reimbursement, managed care, resources, providers, regulation outcome measurement and evaluation, and health policy issues.

### **PH 642. Health Insurance and Financing Systems (3)**

Prerequisite: Public Health 641.

U.S. healthcare financial systems at macro-level. Principles of public programs and private health insurance, types of reimbursement for healthcare organizations and providers, issues of cost containment, effects of uninsurance and underinsurance, and financial practices of other advanced nations. (Formerly numbered Public Health 742B.)

### **PH 644A. Health Services Organization Management (3)**

Prerequisite: Credit or concurrent registration in Public Health 641.

Structure and functioning of organizations that provide and finance health services using a systems theory approach to visions/goals, strategies, structure, and processes. Functions of managers in health care organizations, focusing on interpersonal, informational, decision, ethical, and conflict resolution roles. (Formerly numbered Public Health 644.)

### **PH 644B. Managing High Performing Health Care Organization (3)**

Prerequisites: Public Health 641 and 644A.

Applications of management theory to health care organizations. Organizational change for performance, behavior, quality management, law and ethics, human resource management, and information technology.

### **PH 645. Health Economics (3)**

Prerequisite: Public Health 641.

Economics of health care, including supply and demand factors, efficiency, incentives facing physicians, hospitals, and health plans, economic evaluation of provider performance, health workforce issues, and cost-effectiveness analysis.

### **PH 646. Health Services Research Methods (2)**

Prerequisite: Graduate standing.

Effectiveness of interventions. Changes in delivery, financing, and organization of health care. Analysis of large data sets related to health care industry.

### **PH 647. Quantitative Methods and Health Data Analysis (3)**

Prerequisites: Public Health 602 and 641.

Quantitative methods and data analyses in health services administration. Topics include decision analysis, forecasting and regression, project management techniques, data analysis, and data and information management applications.

### **PH 648. Health Policy (3)**

Prerequisite: Credit or concurrent registration in Public Health 641.

History and future of health policy. Research on major health policy issues including economic, social, ethical, and political forces that influence priorities and decisions. Role of government and private sector in health care.

### **PH 649. Border and Global Public Health Surveillance (3)**

Prerequisites: Public Health 601 and 602.

Data sources for border and global surveillance, including hospital system syndromic data. Methods of data quality control, data analysis, and alerting and communication of information.

### **PH 650. Field Practice (3-6) Cr/NC**

Field instruction in public health settings. Application of public health principles and skills to practical problems. Maximum credit six units of Public Health 650 applicable to a master's degree.

**A.** Epidemiology

**F.** Health Promotion and Behavioral Science

**R.** Required Community Practice

### **PH 661. Theoretical Foundations of Health Promotion (3)**

Prerequisite: Public Health 290.

Psychological, sociological, economic, and political theories relevant to the mission and processes of health promotion.

### **PH 662. Motivating Health Behavior (3)**

Prerequisite: Public Health 303.

Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities.

### **PH 663. Health Promotion Communications Theory and Design (3)**

Prerequisite: Public Health 402.

Theory, design and implementation of health education communications in community contexts. Extensive use of student design, analysis, and projects.

### **PH 664. Health, Society and Human Behavior (3)**

Prerequisites: Psychology 101, Sociology 101.

Historical and contemporary examination of health problems of individuals and communities. Health needs, resources; impact of society on health and health on society.

### **PH 666. Health Promotion Program Planning and Assessment (3)**

Prerequisite: Public Health 661.

Program planning and assessment, theories, systems and procedures relevant to health promotion and education.

### **PH 667. Prevention and Control of Chronic Diseases (3)**

Prerequisites: Public Health 601 and 602.

Health promotion strategies for modification of individual behaviors and social practices to lower risk of chronic disease.

### **PH 668. Seminar in Health Promotion Research (3)**

Prerequisite: Graduate standing in public health.

Philosophical, ethical and methodological issues in current health promotion research and services.

### **PH 672. Public Health Program Evaluation (3)**

Prerequisite: Graduate standing. Recommended: Public Health 666.

Activities, processes, and skills to include communicating results, contextual issues, design, methods, steps, and ensuring summative findings are used.

### **PH 682. Geographic Information Systems and Public Health Spatial Analysis (3)**

Two lectures and two hours of activity.

Prerequisites: Public Health 601 and 602.

Theoretical concepts of geographic information systems (GIS) and applications of GIS in public health. ArcGIS 9 software to illustrate the capabilities and uses of GIS in both academic research and regulatory decision making.

### **PH 696. Contemporary Topics in Public Health (1-3)**

Intensive study in specific areas of public health and health services administration. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**P H 700. Seminar in Public Health (1-3)**

Prerequisites: Public Health 601, 602, and 603.

Investigation of current problems in one of the fields of public health. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit nine units of Public Health 700 applicable to a master's degree. These units may be in a single concentration area or any of the public health concentration areas.

- A. Epidemiology
- D. Environmental Health
- E. Health Management and Policy
- F. Health Promotion and Behavioral Science
- G. Preventive Medicine

**P H 724. Advanced Methods in Epidemiology (3)**

Prerequisites: Public Health 601, 623, and 627.

In-depth methodological issues in performance and interpretation of epidemiologic studies. Study design, cluster analysis, effect modification, accuracy and precision, adjustment of attributable risk, life tables, Kaplan-Meier, Cox proportional hazards modeling, and meta-analysis.

**P H 725. Scientific Writing for Epidemiology (3) Cr/NC**

Prerequisite: Completion of one year of master's level coursework in epidemiology or biometry.

Prepares students to generate a feasible hypothesis, perform, organize and write a literature review, and summarize proposed methodology. Topics include research development and organization, finding data sources, principles of scientific writing and revising, plagiarism, and citation management.

**P H 726. HIV/AIDS Epidemiology and Public Health (3)**

Prerequisite: Public Health 601. Recommended: Public Health 621.

State-of-the-art review of HIV and AIDS within a public health framework. Biology, transmission, host susceptibility, screening and surveillance, domestic and international epidemiology, study design, intervention, and options for prevention (including community-based trials).

**P H 728. Applied Data Analysis (3)**

Prerequisite: Public Health 627 with a grade of B (3.0) or better.

Public health data and presentation of results. Linear regression, logistic regression for binary, missing data analysis, nominal and ordinal data, and survival analysis.

**P H 742A. Health Services Financial Management (3)**

Prerequisite: Graduate standing in public health.

Financial reporting statement including balance sheet and income statement. Financial management indicators including discounted cash flow analysis, long-term debt financing, equity valuation, risk and return, capital budgeting, financial forecasting, and short-term financing.

**P H 743. Hospital and Ambulatory Systems Management (3)**

Prerequisites: Public Health 641 and 644A.

Organization and management of hospitals, integrated health-care systems, medical group practices, and other ambulatory or outpatient facilities. Emphasis on service provision, programs, and plans. San Diego regional healthcare organizations highlighted.

**P H 747. Quality Improvement and Program Evaluation (3)**

Prerequisite: Public Health 647.

Health services quality measurement and improvement to include quality systems policy and management; outcomes and performance measurement; process quality improvement methods; program evaluation methods; development of evidenced-based practices and electronic medical records; and administrative databases.

**P H 748. Health Services Competitive Strategy and Marketing (3)**

Prerequisite: Public Health 644B.

Ways in which healthcare organizations can gain and sustain competitive advantage. Both organization and service level competition and strategies/tactics examined.

**P H 750. Advanced Field Practice (3-6) Cr/NC**

Prerequisite: Public Health 650.

Field instruction in public health setting. Application of public health principles and skills to public health problems. Maximum credit six units of Public Health 750 applicable to a master's degree.

- A. Epidemiology
- D. Environmental Health
- E. Health Management and Policy
- F. Health Promotion and Behavioral Science

**P H 762. Behavioral Medicine (3)**

Prerequisites: Public Health 661 and 662.

Behavioral management approaches to health care problems. Diseases and conditions that arise from physical, psychological and environmental causes; behavioral interventions that attenuate disease process and improve compliance.

**P H 780. Global Health I (3)**

Prerequisites: Public Health 601 and 602.

Principles of global health. Challenges of urbanization and migration to include demography; main causes of morbidity and mortality, including infectious agents; reproductive health; cultural diversity; and global preparedness.

**P H 781. Global Health II (3)**

Prerequisite: Public Health 780.

Global health to include trends and impacts of chronic physical and mental disease; infectious diseases of global importance; nutritional status and disease patterns; resource constrained environments, and design of international health organizations and systems.

**P H 784. Global Environmental Health (3)**

Environmental causes of morbidity and mortality worldwide and strategies to reduce incidence. Regional differences due to anthropogenic and naturally occurring disease agents interacting with differential population susceptibility to disease. Measurement tools for environmental health research in less developed areas of the world.

**P H 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Research in one of the fields of public health. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

**P H 798. Special Study (1-6) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.

Individual study. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

**P H 799A. Thesis (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

**P H 799B. Thesis Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.

Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**P H 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**DOCTORAL COURSES**

**PH 800. Seminar (1-9)**

Prerequisite: Admission to the doctoral program.

Investigation of a particular topic or issue, emphasis on empirical research; topic to be announced in the *Class Schedule*. Maximum credit nine units applicable to a doctoral degree.

**PH 823. Case-Control Studies (3)**

Prerequisites: Public Health 601, 623, and 627. Recommended: Public Health 724.

Design, conduct, and analysis of case-control studies. Methodologic issues, control of biases and misclassification errors, proper use of interpretation of stratification and logistic regression in study of diseases of multifactorial etiology.

**PH 824. Cohort Studies (3)**

Prerequisites: Public Health 601, 623, and 627. Recommended: Public Health 724.

Design, analysis, and application of cohort studies. Cohort study designs, importance of time-varying exposures and outcomes, external and internal validity, and in-depth treatment of approaches to analysis based on cohort sampling methods.

**PH 826. Analysis of Case-Control Studies (3)**

Prerequisites: Public Health 623 and 627.

Statistical methods and applications for analyzing case-control studies. Use of conditional and unconditional logistic regression and approaches for incorporating confounding and interaction in models. Computer applications included.

**PH 827. Analysis of Cohort Studies (3)**

Prerequisites: Public Health 623 and 627.

Statistical models for analyzing cohort studies including general regression methodology, generalized linear models, generalized estimating equations, random effects models and survival analysis. Emphasis on conceptual understanding of these models, implementation with statistical software, and interpretation.

**PH 850. Global Health Practicum (3)**

Prerequisites: Public Health 781, 800, 880.

An international research activity, program evaluation, participation in a multinational organization internship, or field work with government or non-governmental organizations. This practicum is required for completion of the Ph.D. in global health under supervision of program directors.

**PH 861. Behavioral Measurement (3)**

Techniques for assessing behaviors related to health and health risks in key content areas. Multimodel assessment and validation procedures. Students will demonstrate ability to create new measures based on theory and reliability and validity of these measures, using multimodel assessment procedures.

**PH 862. Advanced Theoretical Foundations of Health Behavior Research and Applications (3)**

Philosophy of science, role of theory development and design and conduct of research, with integration of behavioral and biological theories serving as foundation for behavioral science in public health.

**PH 863. Advanced Communication Technology as Applied to Health Behavioral Interventions (3)**

Prerequisites: Public Health 663, admission to the doctoral program, and consent of instructor.

Health communication theory and social marketing practice as applied to public health behavior change. Audience segmentation, formative research channel selection, and message development applied to chronic and infectious disease prevention.

**PH 864. Advanced Research Methods (3)**

Prerequisite: Admission to the Joint Doctoral Program in public health with a concentration in health behavior.

Research process and study design to include conceptualizing research questions and hypotheses, observational study designs, quasi-experimental and experimental study designs, and introduction to qualitative research and mixed methods.

**PH 866. Global Issues in Health Behavior Research and Application (3)**

Prerequisites: Admission to the doctoral program and consent of instructor.

Epidemics in infectious diseases, environmental degradation, population explosion, and other problems with behavioral links threaten the world's population. Global issues such as the role of behavior in disease, bioterrorism, and war.

**PH 867. Seminar: Grantwriting for Health Behavior Researchers (3)**

Prerequisite: Admission to Ph.D. in public health with a concentration in health behavior.

Skills needed to compete for health behavior research funding. Grant proposal writing, submission, review, and revision processes. Background information about grant review procedures and funding mechanisms, with emphasis on national institutes of health.

**PH 880. Seminar: Program Planning and Evaluation in International Settings (3)**

Prerequisite: Public Health 780.

Theory and skills to evaluate research and service programs in international settings to include methods in program planning and evaluation, distinctions between research and evaluation, special considerations in cross-cultural settings, and transadaptation of planning and evaluation materials.

**PH 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**PH 898. Doctoral Special Study (1-9) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

**PH 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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